DIPHTHERIA

A. GENERAL CONSIDERATIONS

Diphtheria is an acute, contagions disease caused by Corynebacterium Diphtheria, that usually attacks the upper respiratory tract. It is usually spread by contact with infected respiratory secretions. The incubation period is 2-7 days.

Corynebacterium Diphtheria is a gram positive club shaped rod that releases an exotoxin. This exotoxin effects the heart, peripheral nerves and to a lesser extent the kidneys. The primary lesion (the membrane) may be in the pharynx, larynx, trachea, skin, nose and bronchial tree. The disease is most intense when the primary lesion is in the pharynx. The membrane is adherent and bleeding occurs if it is removed.

The toxin causes;

a. Heart - myocarditis
b. Peripheral nerves - neuritis with more motor than sensory involvement.
c. Kidneys - interstitial changes

Death can occur from airway obstruction (membrane or edema) or from the results of the toxin.

B. ESSENTIALS OF DIAGNOSIS

1. A characteristic tenacious gray membrane originating on the tonsils spreads into the pillars and pharyngeal walls, surrounded by a zone of erythema and edema. It's removal generally causes bleeding, not usually seen with other causes of pharyngitis.
2. Initial manifestations are a mild sore throat, fever, and malaise.
3. Severe signs of prostration and toxemia with increasing dysphagia and dyspnea follow.
4. Suspect cutaneous diphtheria in patients with skin lesions during respiratory outbreak of Diphtheria.

C. LABORATORY TEST

1. WBC
2. Gram stain of tonsillar exudate.

D. LABORATORY FINDINGS

1. Leukocytosis, greater than 11,000.
2. Gram stain demonstrates gram positive, "chinese" characters.

E. COMPLICATIONS

1. Respiratory obstruction by pseudomembrane.
2. Carditis
3. Neuritis

F. TREATMENT

1. Administer Erythromycin 500mg PO qid x 10 days.
2. Give Aqueous Penicillin G or Pen VK PO x 10 days for the patient allergic to Erythromycin.
3. Bed rest with supportive nursing care and humidified air.
4. Isolation
5. Stop smoking
6. The only effective treatment is antitoxin.
7. Be prepared to perform a cricothyroidotomy or to intubate.

G. DISPOSITION

1. MEDEVAC ASAP.

NASAL TUMOR

A. GENERAL CONSIDERATIONS

Malignant nasal tumors are rare. They are most commonly caused by squamous cell carcinoma. Metastasis is slow.

B. ESSENTIALS OF DIAGNOSIS

1. Bloody nasal discharge.
2. Nasal obstruction.
3. Facial pain.
4. Facial swelling.
5. Diplopia.
6. Submandibular adenopathy.

C. LABORATORY TESTS

1. None.

D. LABORATORY FINDINGS

1. None.

E. COMPLICATIONS

1. Secondary bacterial infection.
2. Metastatic extension of the cancer.

F. TREATMENT

1. Treat symptomatically until the patient is transferred.

G. DISPOSITION

1. MEDEVAC.

STREPTOCOCCAL PHARYNGITIS

A. GENERAL CONSIDERATIONS

Streptococcal pharyngitis is caused by Group A, beta-hemolytic streptococcus. Untreated, it is associated with scarlet fever, rheumatic heart disease and glomerulonephritis. Signs and symptoms can be similar to viral (and mono) pharyngitis.

B. ESSENTIALS OF DIAGNOSIS

1. Sudden onset of a dry, sore throat, often accompanied by headache, loss of appetite, malaise, and chills.
2. Fever.
3. Red, swollen pharyngeal mucosa.
4. The tonsils may be involved just as in tonsillitis (including exudates).
5. Lymphadenopathy of the anterior cervical nodes.

C. LABORATORY TESTS

1. Mono spot.
2. Rapid strep test if available.
3. Gram stain of a throat swab.

D. LABORATORY FINDINGS

1. To rule out mono.
2. May be positive (there are many false negatives with this test).
3. May reveal gram positive cocci in chains.

E. COMPLICATIONS

1. Peritonsillar Abscess.
2. Dehydration (because of fever and throat pain).
3. Glomerulonephritis.
4. Rheumatic Fever.

F. TREATMENT

1. Bed rest.
2. Force fluids.
3. Warm salt water gargles frequently.
4. Analgesics and antipyretics.
5. Administer PEN VK 500mg PO qid for 10 days.
6. Erythromycin 500mg PO qid for 10 days for those patients allergic to Penicillin.

G. DISPOSITION

1. If complications develop or the patient fails to show some improvement in 24-48 hours, contact a Medical Officer for further advice.

PERITONSILLAR ABSCESS
(QUINSY)

A. GENERAL CONSIDERATIONS

Peritonsillar abscess is a complication of acute tonsillitis that occurs when the infection spreads to the peritonsillar space and tissues. The most common fascial (not facial) space abscess. Usually due to Group A Beta Hemolytic Streptococcus.

B. ESSENTIALS OF DIAGNOSIS

1. SYMPTOMS

   a. Severe unilateral pain.
   b. With swallowing, this pain increases and may radiate to the ear on the affected side.
   c. Pain upon opening the mouth. True trismus may be present.
   d. High fever.
   e. Extreme general malaise.

2. SIGNS

   a. Toxic appearing patient.
   b. Bulging in the supratonsillar fossa. May have a frank fluctuant area.
   c. Tonsil and uvula displaced medially.
   e. "Hot potato" voice.

C. LABORATORY TESTS

1. WBC

D. LABORATORY FINDINGS

1. Leukocytosis, greater than 11,000.

E. COMPLICATIONS

1. Partial to complete airway obstruction.
2. Death.

F. TREATMENT

1. Bed rest and IV fluids.
2. Systemic antibiotics; Aqueous Penicillin G or Gentamicin if the patient is allergic to Penicillin.
3. Stop smoking.
4. If the airway becomes impaired (rare), it will be necessary to perform one of the following procedures:

   a. I&D of the PTA
   b. Needle cricothyroidotomy

5. If the airway becomes impaired, it may be necessary to perform an I&D of the fluctuant area (only if the mouth can be opened and the fluctuant area is easily located). This should **ONLY BE DONE BY THOSE EXPERIENCED IN THE PROCEDURE AND AFTER CLEARED BY A MEDICAL OFFICER.** Maintenance of airway takes precedence in life saving measures.

   a. Place the patient on their side, with the foot of the bed elevated. Have adequate suction available.
   b. Infiltrate the mucous membrane with 1% lidocaine.
   c. Use a 1 5/8" 18 GA needle with 5 ml syringe, advance needle while pulling back the plunger until pus appears - remove as much as possible.
   d. Obtain a gram stain of the discharge.

e. The large blood vessels in the area are:

Arteries - ascending pharyngeal, internal carotid and the external carotid.
Veins - internal jugular.

f. Striking any of these vessels would cause uncontrollable hemorrhage with probable patient demise "if using a knife blade."

6. A needle cricothyroidotomy can only provide 30 minutes of breathing time until the CO_2 levels would rise to dangerous levels. A surgical cricothyroidotomy would then be required. See the section on cricothyroidotomy.

G. DISPOSITION

1. Contact a Medical Officer and arrange a MEDEVAC ASAP.

SINUSITIS

A. GENERAL CONSIDERATIONS

Fluid in and inflammation of the sinus cavities is usually associated with either a bacterial infection of the sinus cavities, a tooth infection, allergy, or concurrent URI. The causative agents of bacterial sinusitis are usually streptococci or Hemophilus influenza.

B. ESSENTIALS OF DIAGNOSIS

1. Dull, aching pain in area of involved sinus.
2. Tenderness over involved area.
3. Nasal congestion or discharge.
4. Fever, chills, and headache.
5. Pain is intensified with shaking of the head or pressure or percussion over the sinuses and may radiate to the eyes, ears and teeth.
6. On transillumination, clouding of the affected sinus.

C. LABORATORY TESTS

1. WBC if symptoms are severe.

D. LABORATORY FINDINGS

1. WBC is elevated in bacterial infection and often leukopenic in viral infection.

E. COMPLICATIONS

1. Chronic sinusitis.
2. Orbital cellulitis and abscess.

F. TREATMENT

1. Bed rest.
2. Decongestants X 10 days, no antihistamines. Afrin nasal spray X 3 days.
3. Ampicillin is the drug of choice for suspected bacterial sinusitis: give 500mg PO qid x 10 days. Use Septra 2 tablets (or 1 DS tablet) PO bid x 10 days for the patient who is allergic to Ampicillin.
4. Force fluids.
5. Stop smoking.

G. DISPOSITION

1. Contact a Medical Officer if treatment fails to decrease fever or pain within 48 hours.
2. MEDEVAC if complications occur.
3. Bacterial frontal sinusitis can extend into the brain easily. If the patient presents with significant symptoms or fails to show improvement in 24-48 hours, contact a Medical Officer for possible MEDEVAC.

TONSILLITIS

A. GENERAL CONSIDERATIONS

Tonsillitis is usually of bacterial etiology (but it can be due to a virus). These patients are usually quite ill. The organism most frequently involved is group A beta hemolytic strep.

B. ESSENTIALS OF DIAGNOSIS

1. Sudden onset of sore throat.
2. Fever, chills, malaise, headache.
3. Loss of appetite.
4. Tonsils are red, swollen, and may have exudates.
5. Cervical lymphadenopathy.

C. LABORATORY TESTS

1. CBC.
2. Mono spot.
3. Throat swab for gram stain.

D. LABORATORY FINDINGS

1. Generally will show an elevated white count.
2. To rule out mono.
3. Gram positive cocci in chains (with strep).

E. COMPLICATIONS

1. Peritonsillar abscess.
2. Dehydration may result because of the fever and the pain with swallowing.

F. TREATMENT

1. Bed rest.
2. Force fluids. IV fluids if dehydration is present.
3. Warm salt water gargles frequently.
4. Analgesics/antipyretics.
5. Give PEN VK, 500mg PO qid for 10 days.
6. Erythromycin 500mg PO qid for 10 days in those patients allergic to Penicillin.

G. DISPOSITION

1. Reevaluate in 12-24 hours.
2. If complications develop, contact a Medical Officer ASAP.
3. If the condition does not show some improvement in 48 hours, contact a Medical Officer for further advice.